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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,919	09/18/2003	Janusz Blaszczyk	130109.484	6477

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EXAMINER

CREPEAU, JONATHAN

ART UNIT	PAPER NUMBER
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1745

MAIL DATE	DELIVERY MODE
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05/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/666,919

Applicant(s)

BLASZCZYK ET AL.

Examiner

Jonathan S. Crepeau

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-23 is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Claim Rejections - 35 USC § 103

2. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (U.S. Pre-Grant Publication No. 2002/0022171).

The reference is directed to a fuel cell system comprising a multiple jet ejector (30) having a suction inlet (35) fluidly connected to recirculated hydrogen from the fuel cell (see Fig. 2). Pressurized hydrogen enters through first and second motive inlets (63, 62) and flows through respective nozzles and diffusers (51, 41, 54, 44). Check valves (57, 47) are located at the ends of the diffusers. As disclosed in [0017], the nozzles are designed for different flow regimes (e.g., high-flow and low-flow). A pressure control means (18) controls the pressure of the incoming hydrogen reactant stream. A valve (60) controls the flow to each nozzle of the ejector. This valve is capable of being operated in the manner recited in claims 1 and 13.

The reference does not expressly teach that the ejector comprises an additional ultra-low-flow nozzle and diffuser as recited in claim 6. The reference further does not teach that the system comprises a pressure regulator and that the valve is a solenoid valve, as recited in claims 1 and 13.

However, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the addition of an “ultra-low-flow” nozzle and diffuser to the ejector of Saito et al. would represent the mere duplication of parts that is not sufficient to distinguish over the reference. Generally, a duplication of parts is not considered to be patentably distinguishable unless a new or unexpected result is shown (MPEP 2144.04). As

such, the addition of a third nozzle and diffuser, i.e., an “ultra-low-flow” nozzle and diffuser, to the ejector of Saito et al. would be obvious to the skilled artisan.

In addition, regarding the pressure regulator recited in claims 1 and 13, this element would be obvious to a skilled artisan as a means of controlling the pressure of the hydrogen stream. Saito et al. disclose a pressure control means (18) but appear to be silent as to its exact structure. The use of a regulator as the control means would be obvious since these are well-known components for achieving the desired purpose. Further, as noted above, the reference teaches a valve (60) controlling the flow to each nozzle of the ejector. The use of a solenoid as a means of actuating this valve would also be obvious to the skilled artisan, as solenoid-actuated valves are widely used in industry. As such, the claimed subject matter would be rendered obvious to the skilled artisan.

Response to Arguments

3. Applicant's arguments filed May 10, 2007 have been fully considered but they are not persuasive. Applicants maintain the position that during operation, the flow of Saito goes through either one nozzle or the other, and thus is not capable of operating in the claimed manner. As previously stated by the Examiner, although not expressly stated by Saito, it is submitted that the valve of the reference is capable of being operated in the claimed manner. Applicants' arguments are directed to the reference's discussion of the operation of the valve, wherein fluid flows through either channel 62 or channel 63, but not both at the same time. The Examiner agrees that the reference discloses that the valve is operated in this manner. However,

Art Unit: 1745

it is still the Examiner's position that the valve is capable of being operated such that fluid is allowed to flow through both passages simultaneously. It is noted that the valve is controlled by an electronic control unit (see [0043]). Such an electronic control unit could be programmed to operate the valve in a different way than the reference discloses it is actually operated. Thus, it is submitted that the valve is capable of being operated such that fluid can flow through both passages simultaneously, which is sufficient to read on the claim language. Applicant has not provided any evidence or supporting rationale that the system of Saito lacks the capability to be programmed or otherwise modified to perform in the claimed manner. As such, the claims are still not considered to be patentably distinguishable from Saito.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (571) 272-1292. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 1745

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau
Primary Examiner
Art Unit 1745
May 15, 2007